

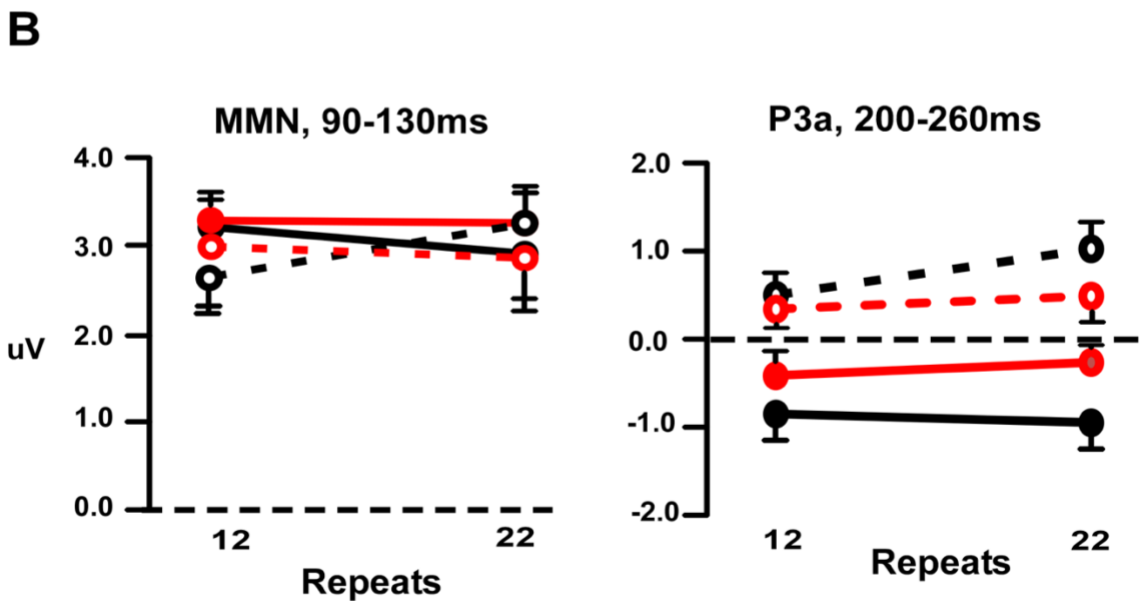
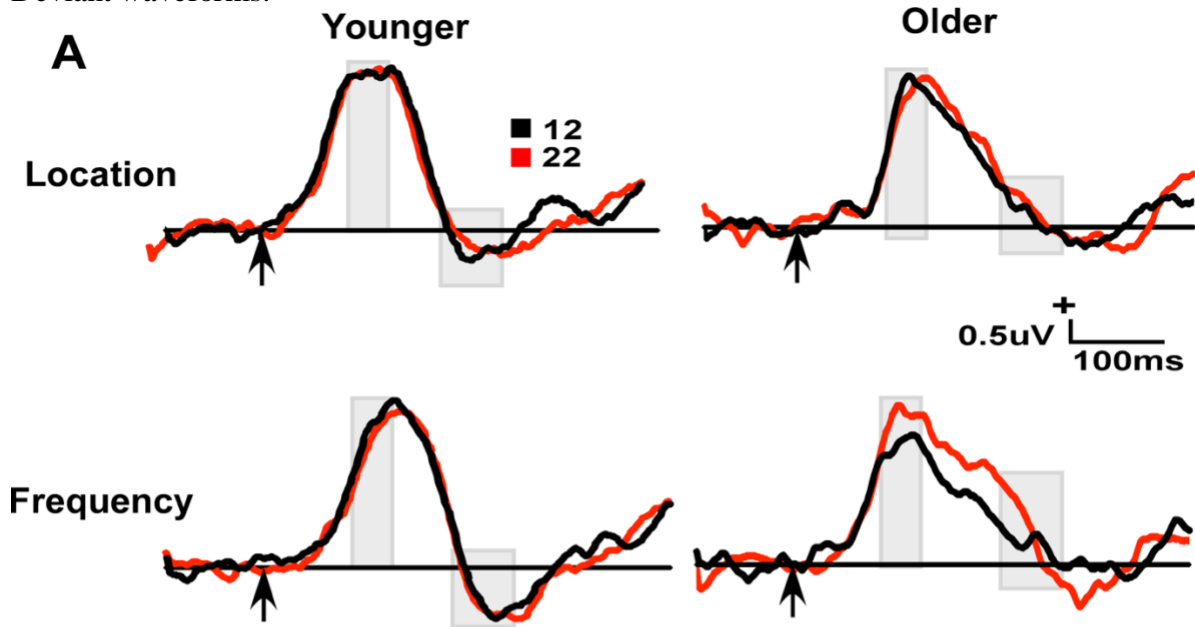
## Supplementary Materials:

1. **Supplementary Method section:** *Additional window analysis for repetition effects in Standard tones at frontal site.*
2. **Supplementary Figure:** *Repetition effects in Mismatch Negativity at mastoid sites (M1,M2)*

### **Supplementary Method: Additional window analysis for repetition effects in Standard tones at frontal site:**

Repeated analysis of first two windows with age-specific non-overlapping latencies used 2 (stimulus-features) x 4 (repetition positions) ANOVAs. The two chosen windows were: 50-98ms and 100-130ms in the younger subjects and 30-78 and 80-130ms in the older subjects. In young subjects, the 50-98ms window showed a trend for repetition ( $F_{(3,27)} = 2.5$ ,  $p = .068$ ), and the 100-130ms window showed significant repetition ( $F_{(3,27)} = 3.17$ ,  $p = .03$ ). In contrast, in the older subjects, only the earlier window, 30-78ms, showed significant repetition ( $F_{(3,30)} = 3.4$ ,  $p = .022$ ) with significant follow-up quadratic effects ( $p = .025$ ), while the repetition was non-significant for the 80-130ms window.

**Supplementary Figure.** Temporal Repetition Effects in Mismatch Negative (Deviant minus Standard) waveforms at left and right mastoid sites, M1&2. Repetition effects were measured for MMN waveform from 90-130ms window, the only common window between Standards and Deviant waveforms.



- Younger, Frequency
- Younger, Location
- Older, Frequency
- Older, Location